

BUDGET PCs

INTRODUCTION

Today's software needs more power and storage space than ever, so it's common to find that your computer needs upgrading. Adding more hard disk space and memory is one way of keeping up to date, but some new technologies are harder to add. If you want a new type of processor or a PCI Express graphics card, it's probably easier and cheaper to buy a new PC.

If you already have a perfectly good monitor, keyboard and mouse, though, why pay for another set? Buying just the computer's base unit can save you plenty of cash, and it's also ideal if you want to choose a new monitor yourself. This month we've tested nine PCs that provide the latest technology for less than £500. Whether you want the ultimate upgrade or the basis of a bespoke system, we'll help you pick the perfect PC.

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Notebooks and video expert

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Whether you want to play the latest games, edit photos and videos or create a media centre, we'll help you put together your perfect system with these versatile base units

THE ULTIMATE £499 PC!

Choosing a... Budget PC

When buying a new computer, it's very important to keep in mind the tasks you want it to perform. This is just as important if you're upgrading from an older system. The nine PCs in this group have very different strengths and weaknesses, so it's essential that you choose one with the abilities that match your needs. Our guide will explain what to look for and what you can ignore.

PRESSING BENCHMARKS

The most common reason for upgrading a PC is the need to run more demanding software. If tough computing tasks such as photo manipulation are slowing your current PC to a crawl, application performance should be your key consideration when buying a new one.

If power in Windows software is your main concern, you can be very specific about what you need and what you don't. Anyone who plans to do a lot of photo manipulation should check the results of our image-editing benchmark on page 73. PCs that excel in this area often use an AMD Athlon 64 processor and always include 1GB of memory.

If you're more interested in video editing, your requirements are quite different. Our video-encoding

benchmark scores on page 73 show that PCs with an Intel Pentium 4 processor tend to be better at this kind of task. If you're interested in both these tasks, consider our overall application scores. These take into account the results of four demanding tests.

GAME ON

If you're upgrading because your current PC can't play the latest games, focus your attention on our 3D speed tests. We run our tests at a resolution of 1,280x1,024 with high levels of detail. If a PC performs well in these tests, you can rest assured that it will be ready to play any modern game.

Most of the PCs in this group fail to generate playable frame rates of 25fps or greater in our tests. This doesn't mean they won't play the latest games, but you'll have to turn down the resolution and detail settings. If you want to play games in glorious detail, look for PCs that can produce at least 25fps, and preferably more.

MEDIA MOGUL

Not everyone wants the fastest PC or one that can play games, so don't be afraid to check for other factors that would be more useful to you. If you want a computer





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Watford Aries Perfecta 5561 - CS04

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for entertainment purposes, you might be better off with one of the PCs that run Windows XP Media Center Edition. Three PCs here have a TV tuner, so you can watch and record TV.

Alternatively, you might be looking for a small PC. Standard tower cases can take up a lot of space, and many aren't particularly beautiful. This month we've included two smaller PCs. Lenovo's 3000 J100 uses a neat desktop case, and Evesham's Mini PC is tiny.

Many people find that the noise made by powerful PC components is distracting. Several PCs in this group are notably louder or quieter than usual, so if you value peace and quiet above all, check our reviews to find a quieter computer.

MAKING THE GRADE

Your new computer should give you many years of service, but for the best possible longevity it's important that you make sure you can upgrade it easily in the future. One day you may want to add more memory or new capabilities with a PCI or PCI Express card, or even install a second graphics card.

Our reviews warn you of potential upgrade pitfalls, such as an ageing processor socket or graphics card slot. We also consider other factors, such as how much room is available inside the case for new hard disks or PCI cards. You can find full details of the number of free upgrade slots and bays in our table on page 74, and the picture

below shows what motherboard features you should be looking out for.

SUPER STORE

If you use your computer to store digital photos or video files, you can never have too much storage space. Evesham's Mini PC contains a small 40GB hard disk, which could fill up all too quickly. Gladiator and Lenovo have included 160GB of storage in their PCs, which is a little tight by today's standards, but every other manufacturer has used a disk that stores at least 200GB. PC Nextday and Watford have included large 250GB disks that are ideal for storing lots of music and video footage.

Upgrade potential Make sure your motherboard can use the latest components

PCI EXPRESS x16 SLOTS The old AGP graphics standard is being phased out, and AGP cards are becoming harder to find. The new PCI Express x16 slot allows for better 3D graphics. With this SLI motherboard you can use two cards at once.

SERIAL ATA (SATA) PORTS Older computers use hard disks that connect using parallel ATA, or PATA. This standard is being phased out in favour of SATA, which is faster and relies on thin cables that are easier to connect.



USB2 PORTS Most external devices, from mice to scanners and printers, connect to a USB2 port. Having more ports makes it easier to connect more peripherals, although you can add more later using a USB2 hub.

PROCESSOR SOCKET There are three common types of processor socket: Socket 754, Socket 939 and LGA775. Buying a PC that uses Socket 939 or LGA775 will make it easier to upgrade in future.



CARRERA Vision CS 04

★★★★★

£467 inc VAT

Carrera's PC has a great case and some good components. Unfortunately, it's outdone by the excellent PC Nextday Zoostorm.

FEATURES

Carrera's Coolermaster case is undoubtedly the best in the group. The black grilled front looks good and provides lots of ventilation, and a 120mm fan creates excellent airflow. Despite a passively cooled graphics card, though, the large case fan, a motherboard fan and a noisy power supply make the PC fairly loud.

Inside there are 10 drive bays, all with convenient sliders that lock the drives in place. A decent-sized 200GB hard disk and a floppy drive are provided, but there's no card reader. The ECS KN1 SLI Lite motherboard comes with all the slots you'll ever need for expansion. It's one of two SLI motherboards in the group, so you can even add a second graphics card.

The motherboard also provides plenty of ports, including eight USB2 ports and Gigabit Ethernet. The integrated sound processor offers 7.1 surround-sound outputs and a coaxial S/PDIF digital output.

PERFORMANCE

With only 512MB of RAM and a 2.0GHz AMD Athlon 64 3200+ processor, this PC lags behind most of the group in Windows tasks. It came seventh in our application benchmarks with a score of 95. It's more than capable of everyday tasks such as word processing or web browsing, but there are much faster PCs in the group.

Fortunately, its Nvidia GeForce 7600GS graphics card is fairly powerful. This PC came third in our Doom 3 test, producing 33.1fps, and managed an impressive 18.5fps in Call of Duty 2. It's a good choice for gaming, but not quite as powerful as Gladiator's Kronos PC.

VERDICT

The Vision's case and motherboard are great, but its performance in Windows is a little tame. It's a good choice for gamers with an eye to future upgrades, but otherwise PC Nextday's Zoostorm is a better buy.

SUMMARY

- ✓ Good case; plenty of expansion room
- ✓ Good 3D performance
- ✗ Below-average application performance

DESKTOP PC 2.0GHz AMD Athlon 64 3200+, 512MB RAM, 200GB hard disk, 256MB Nvidia GeForce 7600GS graphics, DVD+/-RW DL
SUPPLIER Watford Electronics 08716 661616
DETAILS www.savastore.com



CCL PLAY-S34

★★★★★

£499 inc VAT

CCL's PLAY-S34 PC looks rather bland from the outside, but its Windows XP Media Center Edition operating system gives you easy access to your media files.

FEATURES

CCL has fitted a hybrid TV card that receives both analogue and Freeview TV. Windows XP Media Center Edition adds a programme guide, although CCL doesn't include the handy Microsoft remote control with this PC. We recommend you buy one for an extra £21.

Unfortunately, the motherboard uses a Socket 754 processor slot and an AGP graphics slot. Both are being phased out, making this a bad choice if you want to upgrade to the latest technologies. The two memory module slots are full, but with 1GB of RAM provided you shouldn't need to add more in the near future.

The large 250GB hard disk is ideal for recording TV, and the memory card reader should be useful for digital photographers. The Philips DVD drive writes to most types of disc, including both varieties of two-layer media.

This PC is pleasantly quiet. The only obvious noise comes from the processor cooling fan. If you were to replace this with a quiet cooler, you would have an almost silent PC.

PERFORMANCE

The AMD Sempron 3400+ processor isn't very quick, as demonstrated by its score of 62 in our video-encoding test. Fortunately, the 1GB of memory fitted helped to produce a decent score of 120 in our image-manipulation test. Its overall score of 98 is adequate, but there are much faster computers in this group.

CCL's Sapphire X1300 graphics card runs faster than the one fitted in Watford's Perfecta, but it still couldn't produce smooth frame rates in our 3D tests. You'll have to sacrifice detail levels and resolution to play the latest games.

VERDICT

Having Windows XP Media Center and a TV tuner is a good combination, but the PLAY-S34 lacks new technologies and speed.

SUMMARY

- ✓ Media PC with a TV tuner
- ✗ Old motherboard technologies
- ✗ Below-average application and 3D speed

DESKTOP PC 2.0GHz AMD Sempron 3400+, 1GB RAM, 250GB hard disk, 512MB ATI Radeon X1300 graphics, DVD+/-RW +/-DL
SUPPLIER CCL Computers 01274 471201
DETAILS www.cclonline.com



ECLIPSE Ultimate 3700

★★★★★

£499 inc VAT

Eclipse's Ultimate 3700 is pleasantly quiet, and it's one of the fastest PCs here in Windows applications. However, its 3D performance isn't quite up to the same standard.

FEATURES

The Ultimate's mini tower chassis is compact but looks rather bland. It holds a fast NEC DVD writer and a floppy disk drive, but no memory card reader. Noise is kept to a minimum thanks to a quiet power supply, a passively cooled graphics card and a nearly silent case fan.

Despite the small case, there's still enough room inside for future upgrades. There are free drive bays of both sizes and the motherboard has free memory and PCI slots. The motherboard itself provides all the usual connectors, including six USB2 ports and 7.1 channel surround-sound audio.

The 200GB hard disk should be sufficient for most storage needs. The only other card installed is a modem, which could be useful if your broadband connection fails.

PERFORMANCE

The Eclipse uses a fast 2.2GHz AMD Athlon 64 3700+ processor and 1GB of RAM. PC Nextday's Zoostorm uses the same processor and 1GB of memory, but a slightly faster hard disk with 16MB of cache memory gives it the edge. The Ultimate scored 114 overall in our application benchmarks, just a few points behind the Zoostorm. Unless you want a dual-core processor to speed up video recoding, this is one of the fastest PCs in the group.

Eclipse's ATI Radeon 1600 Pro graphics card performed fairly well in our 3D tests. It ran Doom 3 at 20.6fps, and will suffice for most occasional gamers. Its Call of Duty 2 score of 9.7fps shows that you'll have to reduce detail settings to get new games running smoothly.

VERDICT

The Ultimate 3700 is smaller and a bit quieter than the similar PC Nextday Zoostorm, but it's not as powerful at gaming. Unless noise is a key concern, we'd recommend the Zoostorm.

SUMMARY

- ✓ Great application performance
- ✓ Quiet fans and power supply
- ✗ Not as fast in 3D

DESKTOP PC 2.2GHz AMD Athlon 64 3700+, 1GB RAM, 200GB hard disk, ATI Radeon X1600 Pro graphics, DVD+/-RW +/-DL
SUPPLIER Eclipse Computers 08707 456000
DETAILS www.eclipse-computers.com



EMACHINES E4038 Media Center PC

★★★★★

£499 plus delivery inc VAT

The Emachines PC looks good, runs Windows XP Media Center Edition and has a TV tuner. It's powerful in Windows, but no good for gaming.

FEATURES

Windows XP Media Center Edition lets you use a full-screen graphical interface to access your photos, video and audio files. Emachines has also included the excellent Media Center remote control, so it's easy to choose items to watch or listen to without the mouse.

Unfortunately, the TV tuner inside supports only analogue TV channels. Media Center can be trained to work with a Freeview set-top box, but you'll need one with an S-video output to get a decent picture. A digital or hybrid TV card such as those in the Watford Perfecta and CCL PLAY-S34 would have been a far better choice.

Despite containing three fans, the E4038 is very quiet in use. The motherboard has just two memory slots, but 1GB of RAM is fitted so you shouldn't need to add more for a long time.

PERFORMANCE

This PC's 3.0GHz Intel Pentium 4 524 processor gives it different strengths and weaknesses to the AMD-based computers. It came second in our video-encoding test with a score of 117. It has 1GB of RAM, which helped it to a very respectable score of 134 in our image test. Its score of 112 overall puts it in third place, and only a little way behind the leaders.

Unfortunately, its application performance is not matched in 3D games. The GeForce 6200 graphics card is very limited. It failed to run our Call of Duty 2 test, and ran Doom 3 at a stuttering 2.5fps. This is not a good buy for anyone who wants to play 3D games.

VERDICT

The E4038 is quiet and has plenty of power in Windows tasks. If you want a Media Center PC, it's a tough choice between this system, with a remote control, and CCL's PLAY-S34, which has a hybrid analogue and digital TV tuner.

SUMMARY

- ✓ Windows XP Media Center Edition
- ✓ Good application performance
- ✗ Poor 3D performance

DESKTOP PC 3.0GHz Intel Pentium 4 524, 1GB RAM, 200GB hard disk, 64MB Nvidia GeForce 6200 graphics, DVD+/-RW +/-DL
SUPPLIER www.comet.co.uk
DETAILS <http://uk.emachines.com>



EVESHAM Mini PC

★★★★

£499 plus delivery inc VAT

Evesham's Mini PC is perfect for those with limited space, but it's not very powerful and has a small hard disk.

FEATURES

To make the most of its tiny case, Evesham has used several notebook PC components to build the Mini PC. Its hard disk is a very small 40GB model, which won't hold a large music or video collection. The only easy upgrade would be to replace the memory with a larger 1GB module.

All the ports are on the rear of the case. There's only a DVI connector for hooking up a monitor, plus a TV output that supports component, S-video and composite. This means you can plug the Mini PC into your TV and use it as a media centre in your living room. Unlike most larger PCs it has no surround-sound outputs and can't write to two-layer DVDs.

Only two USB2 ports are provided, so you'll need a USB hub. This is the only PC here with a FireWire port, though, and its Gigabit Ethernet port allows for fast network connections.

When in use, the Mini PC makes less noise than any other computer in the group. It's almost silent by PC standards and won't disturb your concentration if you're working hard or watching a DVD.

PERFORMANCE

With a Celeron M processor running at 1.4GHz and just 512MB of memory, the Mini PC suffered in our benchmark tests and scored just 51 overall. It will suffice for office work or surfing the internet, but it's not suitable for demanding tasks such as video editing.

The Mini PC uses an integrated graphics chip of the type usually found in business notebook computers. It's incapable of playing modern 3D games.

VERDICT

Evesham's Mini PC is impressively small and quiet, but its size comes at the expense of power, and it could do with a few more USB ports. Unless you really need a tiny PC, you can buy better.

SUMMARY

- ✓ Tiny, quiet PC
- ✗ Very slow in applications and 3D
- ✗ Very small hard disk

MINI PC 1.4GHz Intel Celeron M 360, 512MB RAM, 40GB hard disk, Intel GMA 900 integrated graphics, DVD+/-RW DL
SUPPLIER Evesham 08701 609500
DETAILS www.evesham.com



GLADIATOR Kronos CS3500

★★★★

£499 inc VAT

Gladiator's Kronos CS3500 is fairly powerful and has handy external SATA2 ports. It's noisy, though, and its hard disk is a little small.

FEATURES

This is the first PC we've seen with eSATA2 ports. This new technology enables you to attach external hard disks using the SATA 300 standard, which is faster than USB2 and FireWire. Suitable disks are thin on the ground at the moment, but it's good to see really new technology in such an inexpensive PC.

The motherboard also has all the other features you'd want. Two PCI Express x16 slots mean you could upgrade the graphics to a two-card SLI system. Four memory slots are provided, so it would be easy to add more memory to the 1GB supplied. The 160GB hard disk is a little small, but it holds four times as much as the one Evesham includes.

There's no cooling fan mounted on the rear of the case, but we didn't experience any overheating problems. Despite this, and a passively cooled Northbridge, the Kronos is rather loud in use. Most of this noise comes from a fan on the graphics card.

PERFORMANCE

The AMD Athlon 64 3500+ processor in this PC runs at the same speed as the 3700+ in the PC Nextday and Eclipse machines, but it has less cache memory. This shows in our benchmarks where the Kronos scored slightly fewer points than the PC Nextday and Eclipse computers in our video and overall rankings.

The Kronos's Nvidia GeForce 6800 Xtreme graphics card is fast but is based on slightly old technology. It did well in Doom 3, producing 33.2fps, but our newer Call of Duty 2 benchmark taxed it a little. It's a good choice if you want to play games, but it's not the best gaming PC here.

VERDICT

The Kronos is a powerful PC with an impressive motherboard. It's not the fastest PC here, though, and its hard disk could be bigger.

SUMMARY

- ✓ Good application benchmark scores
- ✗ Rather noisy
- ✗ Small hard disk

DESKTOP PC 2.2GHz AMD Athlon 64 3500+, 1GB RAM, 160GB hard disk, 256MB Nvidia GeForce 6800XT graphics, DVD+/-RW +/-DL
SUPPLIER Gladiator Computers 08456 444666
DETAILS www.gladiatorcomputers.com



LENOVO 3000 J100 (PQCB1UK)



£445 plus delivery inc VAT

Lenovo's PC looks completely different to the others. It's an inexpensive, no-frills office PC, but it lacks power in Windows and 3D tasks.

FEATURES

Lenovo's 3000 J100 comes in a small desktop case, but you can stand it on one end as a very slim tower if you prefer. When you switch it on, it emits a loud whoosh of air, but it quickly settles down to be almost inaudible. It's nearly as quiet as Evesham's Mini PC.

Space inside the compact grey chassis is rather cramped. The Lenovo has three spare PCI slots, but only half-height PCI cards will fit inside the case. It has just two memory slots, but only one is filled with a 512MB module, leaving room to upgrade later. There's also a spare drive bay for adding a second hard disk.

The current 160GB hard disk is one of the smaller ones in the group, but it provides much more space than you'll ever need for office tasks. Windows XP Professional is installed, which could be handy if you want to connect to an office network.

PERFORMANCE

With an Intel Celeron D processor and only 512MB of RAM, this PC won't win any prizes for speed. It's not as slow as the Evesham Mini PC, but its score of 71 overall in our benchmarks is some way behind the rest of the group. It's suited to office and internet use rather than video encoding and image editing.

Like Evesham, Lenovo has opted for an integrated graphics processor rather than a dedicated graphics card. The SiS Mirage graphics chip couldn't run any of our 3D tests, and the 3000 J100 is unsuitable for playing modern games.

VERDICT

Lenovo's PC is inexpensive but underpowered. Unless you want the cheapest PC possible for office and internet work, you should pay a little more for a lot more power.

SUMMARY

- ✓ Small and quiet
- ✗ Small hard disk
- ✗ Slow in applications and 3D

DESKTOP PC 3.0GHz Intel Celeron D 346, 512MB RAM, 160GB hard disk, SiS Mirage integrated graphics, DVD+/-RW DL
SUPPLIER <http://uk.insight.com>
DETAILS www.lenovo.co.uk



PC NEXTDAY Zoostorm 1-3401 Versatile PC



£499 inc VAT



There's a lot of room in the Zoostorm's case, but it's easily the fastest PC in the group. Unless you think silence is golden, it's a great buy.

FEATURES

The case won't attract much attention, but it's hard not to notice the Zoostorm when it's on. The processor, graphics card, Northbridge and power supply fans combine to produce a loud, steady hum. Good 3D performance often comes with this kind of noise, though.

The motherboard has all the features you could want and lots of spare slots for upgrades. It has seven USB2 ports and a Gigabit Ethernet port. The surround-sound chip produces six rather than eight channels, but a coaxial S/PDIF output is included. It has 1GB of memory, and you could easily add more in the two free slots.

The 250GB hard disk is one of the largest in the group. All the features you would expect from a modern PC are here, including a dual-format two-layer DVD writer, a memory card reader and a floppy disk drive.

PERFORMANCE

The Zoostorm produced excellent results in all our benchmark tests. Watford's dual-core Aries was faster in our video-encoding test and PCMark04, but the Zoostorm's score of 117 overall puts it at the top of the table.

In 3D tasks the Zoostorm beat every other PC in the group. Its Nvidia GeForce 7600GT graphics card is faster than the similar 7600GS card in the Carrera. It ran our Doom 3 test at 48.2fps and produced 25.1fps in Call of Duty 2. You should be able to play the latest games on the Zoostorm for some time to come.

VERDICT

Whether you want to work in Windows or slay your enemies in 3D games, PC Nextday's Zoostorm is easily the most capable PC in this group. Unless you want a PC that runs very quietly, it's the one to buy.

SUMMARY

- ✓ Runs applications effortlessly
- ✓ Powerful in 3D games
- ✗ Very noisy

DESKTOP PC 2.2GHz AMD Athlon 64 3700+, 1GB RAM, 250GB hard disk, Nvidia GeForce 7600GT graphics, DVD+/-RW +/-DL
SUPPLIER sales@pcnextday.co.uk
DETAILS www.pcnextday.co.uk



WATFORD Aries Perfecta 5561 - CS 04



£452 inc VAT

A powerful dual-core processor and a digital TV tuner card make Watford's Perfecta ideal for video enthusiasts.

FEATURES

Watford's dark brown PC case isn't particularly beautiful, but the inside is well laid out with quick-release catches on the drive bays. The 250GB hard disk will hold plenty of files.

Sadly, the motherboard won't be easy to upgrade. It has only two memory slots and Watford has filled these with 512MB of RAM, so in order to upgrade you'll have to throw at least one module away. A free PCI slot allows you to add a sound card or other device.

The other PCI slot is filled with a Twinhan digital TV tuner card. This comes complete with CyberLink's excellent PowerCinema 4 application, which combines TV scheduling and a DVD player in a simple interface.

The power supply and processor fan are quiet, making a low whirring at worst. The graphics card emits an incredible whine, though, making this one of the louder PCs.

PERFORMANCE

This is the only PC in the group with a dual-core processor. The 2.66GHz Pentium D 805 is ideal for encoding and decoding video or running two tasks at once. Its abilities are demonstrated by a fantastic score of 158 in our video-encoding test, but with just 512MB of RAM, it scored an average 103 overall.

Despite making a racket, the ATI Radeon X1300 graphics card isn't particularly powerful. It ran Doom 3 at 10.4fps and Call of Duty 2 at 6.5fps. You'll need to turn down the detail levels and resolution to play modern games.

VERDICT

The combination of a dual-core processor, digital TV card and a large hard disk is good for those fond of digital video, and the Perfecta costs less than most PCs here. It can't quite keep up with the Zoostorm, but it's a good buy.

SUMMARY

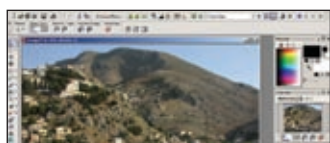
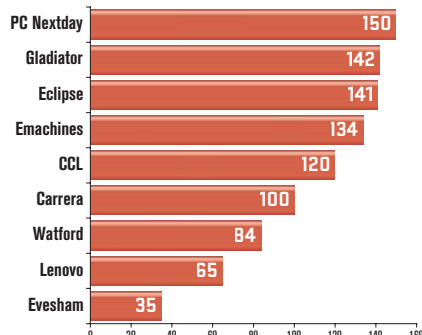
- ✓ Dual-core processor
- ✓ Digital TV card; large hard disk
- ✗ Noisy, ineffective graphics card

DESKTOP PC 2.66GHz Intel Pentium D 805, 512MB RAM, 250GB hard disk, 256MB ATI Radeon X1300 graphics, DVD+/-RW DL
SUPPLIER Watford Electronics 08716 661616
DETAILS www.watford.co.uk

BENCHMARKS

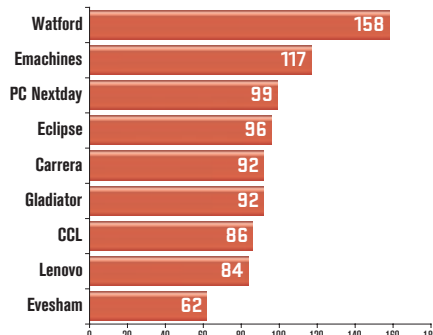
2D Performance Shopper application tests

Image-Editing Test



SETTINGS We run our application tests at 1,280x1,024 resolution and in 32-bit colour
WEB www.computershopper.co.uk

Video-Encoding Test



Computer Shopper's 2D benchmarks are designed to show how PCs stand up to the toughest tasks Windows can throw at them. Today's PCs have no problem running office applications such as Word and Excel, so we have chosen to focus our tests on areas where you could experience difficulties.

In the new version there are four scripts. Encoding a short video to MPEG2 format is a processor-intensive task that anyone transferring home videos to DVD will have to tackle. Our

Overall

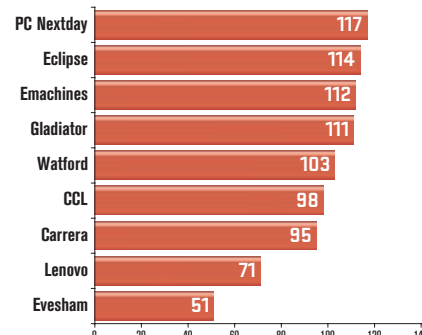
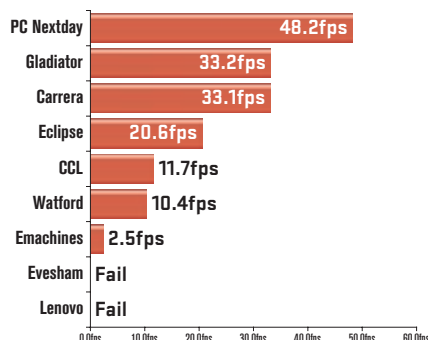


image-editing test simulates a session of photo enhancement using Paint Shop Pro X. In our third test, a set of audio files is ripped to MP3 format. Finally, we have a multitasking test designed to test the benefits of HyperThreaded and dual-core processors. This test compresses a DVD for playback on a Pocket PC at the same time as running our image-editing test.

Figures are relative to a reference Evesham Athlon 64 3500+, which scores 100 in all tests.

3D Performance Doom 3/Call of Duty 2

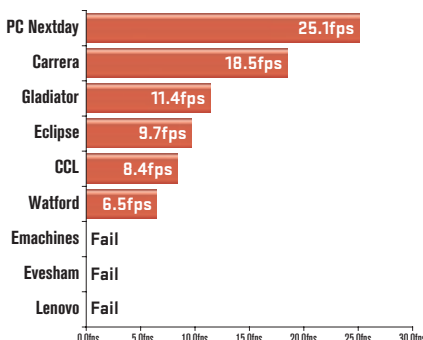
Doom 3



SETTINGS 1,280x1,024 resolution, high quality, 4x AA
WEB www.doom3.com

Our Doom 3 benchmark tests whether a PC has the power needed to play cutting-edge 3D games. A good score here indicates that a PC should cope with any graphically intense 3D game coming on to the market today.

Call of Duty 2

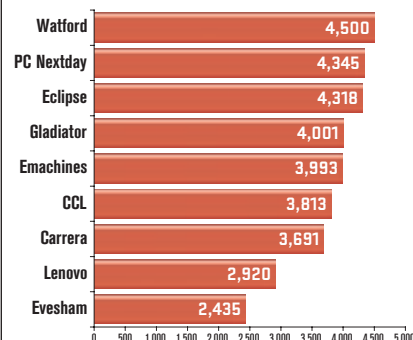


SETTINGS 1,280x1,024 resolution, 32-bit colour, default settings
WEB www.futuremark.com

Call of Duty 2 uses DirectX and is one of the most demanding games available at the moment. With a wide range of effects and frenetic action, it tests every aspect of graphics performance.

2D Performance PCMark04

PCMark04



SETTINGS 1,280x1,024 resolution, 32-bit colour, default settings
WEB www.futuremark.com

As well as our own benchmarks, we test all desktop and notebook PCs using Futuremark's PCMark04. You can download a free version of this benchmark from www.futuremark.com/download.

Labs verdict Budget PCs

We were impressed by the wide variety of PCs available for such a low price. Most are reasonably powerful and good value, but a few stand out from the crowd.

If you want to use your PC to record TV, the Emachines E4038 Media Center PC is a good choice. It's quiet and comes with Windows XP Media Center Edition, a remote control and a TV tuner. Eclipse's Ultimate

3700 is a fast, quiet PC that's great as long as you're not bothered about playing 3D games. If you're interested in video editing, consider Watford's Aries Perfecta 5561 – CS 04. It could do with more memory, but its dual-core processor makes light work of video encoding and it costs almost £50 less than most.

To get the most for your money, we recommend PC Nextday's Zoostorm 1-3401. It

BEST BUY
PC NEXTDAY
Zoostorm 1-3401
 ★★★★★



was the fastest computer in our application tests and 3D benchmarks, and it's easily the best PC here for gaming. With no major faults to speak of, it wins our Best Buy award.

MAUNFACTURER	CARRERA	CCL	ECLIPSE	EMACHINES
Model	Vision CS 04	PLAY-S34	Ultimate 3700	E4038 Media Center PC
Overall rating	★★★★	★★★	★★★★	★★★★
Processor	AMD Athlon 64 3200+	AMD Sempron 3400+	AMD Athlon 64 3700+	Intel Pentium 4 524
Processor speed	2.0GHz	2.0GHz	2.2GHz	3.06GHz
Processor socket	Socket 939	Socket 754	Socket 939	LGA775
Level 1 cache	128KB	128KB	128KB	16KB
Level 2 cache	512KB	256KB	1MB	1MB
Memory installed	512MB	1GB	1GB	1GB
Memory type	PC3200	PC3200	PC3200	PC4200
Maximum memory	4GB	2GB	4GB	2GB
Motherboard	ECS KN15LI Lite	Foxconn 6100K8MB-RS	ASRock 939S56-M	MSI RC410M-L
Motherboard chipset	Nvidia nForce4 SLI	Nvidia nForce 4	SIS 756	ATI Radeon Xpress 200
Memory bus speed	200MHz	200MHz	200MHz	133MHz
BIOS	Phoenix	Phoenix	AMI	Phoenix
PORTS				
USB2 ports (front/rear)	2/6	2/4	2/4	1/4
FireWire ports (front/rear)	0/0	0/0	0/0	0/0
Networking	10/100/1,000	10/100	10/100	10/100
Legacy ports	Parallel, 2x PS/2, Serial	Parallel, 2x PS/2, Serial	Parallel, 2x PS/2, Serial	Parallel, 2x PS/2
INTERNAL EXPANSION				
Case	Midi tower	Mini tower	Mini tower	Mini tower
Case size HxWxD	428x197x477mm	378x177x420mm	360x169x389mm	362x184x406mm
PCI (free)	3 (2)	3 (1)	2 (1)	2 (0)
PCI-E x1 (free)	1 (1)	0 (0)	1 (1)	1 (1)
PCI-E x16 (free)	2 (1)	0 (0)	1 (0)	1 (0)
AGP (free)	0 (0)	1 (0)	0 (0)	0 (0)
Serial ATA (free)	4 (3)	2 (1)	2 (1)	2 (2)
Memory (free)	4 (2)	2 (0)	4 (2)	2 (0)
Drive bays 3½" (free)	5 (3)	3 (1)	5 (3)	4 (2)
Drive bays 5¼" (free)	5 (4)	2 (1)	2 (1)	2 (1)
HARD DISK				
Model	Maxtor DiamondMax 10 6V200E0	Seagate Barracuda ST3250824AS	Maxtor DiamondMax 10 6V200E0	Western Digital Caviar WD2000BB
Interface	SATA 300	SATA 300	SATA 300	ATA 100
Capacity	200GB	250GB	200GB	200GB
Spin speed	7,200rpm	7,200rpm	7,200rpm	7,200rpm
GRAPHICS				
Technology	PCI Express	AGP	PCI Express	PCI Express
Graphics card	XXFX GeForce 7600GS 256MB DDRII eXtreme	Sapphire Radeon X1300	Gigabyte GV-RX16P256D-RH	Nvidia GeForce 6200
Graphics chipset	Nvidia GeForce 7600GS	ATI Radeon X1300	ATI Radeon X1600 Pro	Nvidia GeForce 6200
Graphics memory	256MB	512MB	256MB	64MB (+192MB shared)
Graphics/video ports	DVI x2, S-video out and component out via dongle (not included)	DVI, D-sub, S-video out and component out via dongle (not included)	DVI, D-sub, S-video out and component out via dongle (not included)	DVI x2, S-video
SOUND				
Sound card	Realtek ALC850	Realtek ALC655	Realtek ALC850	Realtek ALC655
Sound card outputs	7.1 line out, coaxial S/PDIF out	5.1 line out	7.1 line out	5.1 line out
Speakers	None	None	None	Emachines stereo speakers
REMOVABLE DRIVES				
Floppy drive 3½"	Yes	Yes	Yes	No
Memory card reader	None	CompactFlash, Secure Digital, MultiMedia Card, Memory Stick, Smart Media, MicroDrive	None	CompactFlash, Secure Digital, MultiMedia Card, Memory Stick, Smart Media, MicroDrive
Optical drive	Sony DW-G120A (16X DVD+R, 16X DVD-R, 8X DVD+RW, 6X DVD-RW, 16X DVD+R DL, 24X CD-R, 24X CD-RW, 16X DVD, 48X CD)	Philips SPD2400L1 (16X DVD+R, 16X DVD-R, 8X DVD+RW, 6X DVD-RW, 8X DVD+R DL, 4X DVD-R DL, 48X CD-R, 24X CD-RW, 16X DVD, 48X CD)	NEC ND-4570A (16X DVD+R, 16X DVD-R, 8X DVD+RW, 6X DVD-RW, 8X DVD+R DL, 6X DVD-R DL, 48X CD-R, 32X CD-RW, 16X DVD, 48X CD)	Lite-On SHW-1635S (16X DVD+R, 16X DVD-R, 8X DVD+RW, 6X DVD-RW, 8X DVD+R DL, 4X DVD-R DL, 48X CD-R, 24X CD-RW, 16X DVD, 48X CD)
OTHER HARDWARE				
Modem	No	Yes	Yes	Yes
Keyboard	None	None	None	Emachines wired keyboard
Mouse	None	None	None	Emachines wired ball mouse
Keyboard/mouse rating	N/A	N/A	N/A	★★
Extras	None	Pinnacle PCTV 310i TV tuner (RF, FM, S-video and composite inputs)	None	Microsoft Media Center remote, Hauppauge WinTV PCI TV tuner (RF, FM, S-video, composite and phono inputs)
SOFTWARE				
Software included	CyberLink PowerDVD 5, Microsoft Works 8, F-Secure Internet Security 2005, Roxio Easy CD Creator 7	Nero 6 Suite, CyberLink PowerDVD XP	CyberLink PowerDVD 5, Nero Express 6	Microsoft Works 8, CyberLink PowerDVD 6, Nero 6 Suite
Operating system	Windows XP Home	Windows XP Media Center Edition 2005	Windows XP Home	Windows XP Media Center Edition 2005
Operating system restore option	Windows CD	Windows CD	Windows CD	Restore CD and partition
BUYING INFORMATION				
Warranty (parts and labour)	One year onsite	One year onsite	One year RTB	One year RTB
Technical support times	9am-6pm Mon-Fri (premium rate 24/7 service also available)	9am-5.30pm Mon-Fri, 9am-4pm Sat	9.30am-6pm Mon-Fri	9am-8pm Mon-Fri, 9am-6pm Sat, 10am-6pm Sun and bank holidays
Company founded	1972	1995	1996	1985
Tech support staff	20	10	8	Not disclosed
Employees	130	80+	Not disclosed	Not disclosed
Price including delivery (inc VAT)	£467	£499	£499	£499 plus delivery
Price including delivery (ex VAT)	£397	£425	£425	£425 plus delivery
Supplier	Watford Electronics	CCL Computers	Eclipse Computers	Cornet
Phone	08716 661616	01274 471264	08707 456000	08705 425425
Web	www.savastore.com	www.cclonline.com	www.eclipse-computers.com	www.cornet.co.uk



EVESHAM	GLADIATOR	LENOVO	PC NEXTDAY	WATFORD
Mini PC	Kronos CS3500	3000 J100 (PQCB1UK)	Zoostorm 1-3401 Versatile PC	Aries Perfecta 5561 - CS04
★★★★	★★★★	★★	★★★★★	★★★★★
Intel Celeron M 360	AMD Athlon 64 3500+	Intel Celeron D 346	AMD Athlon 64 3700+	Intel Pentium D 805
1.4GHz	2.2GHz	3.06GHz	2.2GHz	2.66GHz
Socket 479	Socket 939	LGA775	Socket 939	LGA775
64KB	128KB	16KB	128KB	2X 16KB
1MB	512KB	256KB	1MB	2X 1MB
512MB	1GB	512MB	1GB	512MB
PC3200	PC3200	PC3200	PC3200	PC4200
1GB	4GB	2GB	4GB	2GB
AOpen MiniPC MP915-B	ASRock 939SLI-eSATA2	GA 85661FXM-775	ECS nForce4 A939	EQS M65P9-ALV-B
Intel 915GM	ULi M1697	SIS661FX	Nvidia nForce 4	ATI Radeon Xpress 200
200MHz	200MHz	133MHz	200MHz	200MHz
Phoenix	AMI	Lenovo	Phoenix	Phoenix
0/2	2/4	2/4	3/4	2/4
0/1	0/0	0/0	0/0	0/0
10/100/1,000	10/100	10/100	10/100/1,000	10/100
None	Parallel, 2x PS/2, Serial	Parallel, 2x PS/2, Serial	Parallel, 2x PS/2, Serial	Parallel, 2x PS/2, Serial
Mini PC	Midi tower	Mini desktop	Midi tower	Midi tower
50x165x165mm	422x182x416mm	99x326x393mm	424x209x455mm	431x185x480mm
1 mini-PCI (1)	3 (3)	3 half-height (3)	3 (2)	2 (1)
0 (0)	1 (0)	0 (0)	2 (2)	0 (0)
0 (0)	2 (1)	0 (0)	1 (0)	1 (0)
0 (0)	0 (0)	1 half-height (1)	0 (0)	0 (0)
0 (0)	4 (3) (inc. eSATA x2)	2 (1)	4 (3)	2 (1)
1 (0)	4 (2)	2 (1)	4 (2)	2 (0)
1x 2½" (0)	7 (5)	2 (1)	4 (1)	5 (3)
1x notebook drive slot (0)	4 (3)	1 (0)	3 (2)	4 (3)
Western Digital Caviar WD400UE	Western Digital Caviar WD1600JS	Western Digital Caviar WD1600JS	Western Digital Caviar WD2500KS	Maxtor MaxLine Plus II 7Y250M0
ATA 100	SATA 300	SATA 300	SATA 300	SATA 150
40GB	160GB	160GB	250GB	250GB
5,400rpm	7,200rpm	7,200rpm	7,200rpm	7,200rpm
PCI Express	PCI Express	AGP	PCI Express	PCI Express
Intel GMA 900 integrated	XFX GF 6800 Xtreme	SIS Mirage integrated	Inno3D 7600GT	Connect3D ATI X1300
Intel GMA 900	Nvidia GeForce 6800XT	SIS M661FX	Nvidia GeForce 7600GT	ATI Radeon X1300
128MB shared	256MB	32MB shared	256MB	256MB
DVI, S-video out and component out via dongle (included)	DVI x2, S-video	D-sub	DVI, D-sub, S-video out and component out via dongle (included)	DVI, D-sub, S-video out and component out via dongle (not included)
Intel HD audio	Realtek ALC660	Realtek ALC655	Realtek ALC655	Realtek ALC655
2.1 line out	5.1 line out	5.1 line out	5.1 line out, coaxial S/PDIF out	5.1 line out
None	None	None	None	None
No	Yes	No	Yes	Yes
No	No	No	CompactFlash, Secure Digital, MultiMedia Card, Memory Stick, Smart Media, MicroDrive, xD	CompactFlash, Secure Digital, MultiMedia Card, Memory Stick, Smart Media, MicroDrive
Matshita UJ-845S (8X DVD+R, 8X DVD-R, 4X DVD+RW, 4X DVD-RW, 24X DVD+R DL, 5X DVD-RAM, 24X CD-R, 16X CD-RW, 16X DVD, 48X CD)	Samsung SH-S162A (16X DVD+R, 16X DVD-R, 8X DVD+RW, 6X DVD-RW, 8X DVD+R DL, 6X DVD-R DL, 5X DVD-RAM, 48X CD-R, 32X CD-RW, 16X DVD, 48X CD)	LG GSA-4163B (16X DVD+R, 16X DVD-R, 8X DVD+RW, 6X DVD-RW, 4X DVD+R DL, 5X DVD-RAM, 40X CD-R, 24X CD-RW, 16X DVD, 40X CD)	Philips SPD2400L1 (16X DVD+R, 16X DVD-R, 8X DVD+RW, 6X DVD-RW, 8X DVD+R DL, 4X DVD-R DL, 48X CD-R, 24X CD-RW, 16X DVD, 48X CD)	Sony DW-G120A (16X DVD+R, 16X DVD-R, 8X DVD+RW, 6X DVD-RW, 16X DVD+R DL, 24X CD-R, 24X CD-RW, 16X DVD, 48X CD)
No	No	No	No	No
None	None	Lenovo keyboard	None	None
None	None	Lenovo optical mouse	None	None
N/A	N/A	★★★★	N/A	N/A
None	None	None	None	Twinhan DTV Ter TV card (RF, FM, S-video and composite inputs)
CyberLink PowerDVD MCE codec, Bullguard Security Centre, Wanadoo, Sonic Bonus DVD package, Microsoft Works 8.5	CyberLink PowerDVD XP, Nero 6	Lotus Notes 7, Lotus Smartsuite 9	CyberLink PowerDVD 2005, Nero 6	CyberLink PowerDVD 5, Microsoft Works 8, F-Secure Internet Security 2005, Roxio Easy CD Creator 7
Windows XP Media Center Edition 2005	Windows XP Home	Windows XP Professional	Windows XP Home	Windows XP Home
Restore CD	Windows CD	Restore partition	Restore partition and Windows CD	Windows CD
One year RTB	One year onsite	One year RTB	One year RTB	One year onsite
9am-5.30pm Mon-Sat	10am-6pm Mon-Fri	8am-8pm Mon-Fri	9am-6pm Mon-Fri	9am-6pm Mon-Fri (premium rate 24/7 service also available)
1983	1999	1984 (as Legend)	1993	1972
83	9	Not disclosed	10	20
419	16	19,000	68	130
£499 plus delivery	£499	£445 plus delivery	£499	£452
£425 plus delivery	£425	£365 plus delivery	£425	£385
Evesham	Gladiator Computers	Insight	PCNextday	Watford Electronics
08701 609500	08456 444666	0800 333333	Web only	08716 661616
www.evesham.com	www.gladiatorcomputers.com	http://uk.insight.com	www.pcnextday.co.uk	www.savastore.com